



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,131	12/10/2003	Atsushi Kitamura	031313	8901

23850 7590 05/17/2006

ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP
1725 K STREET, NW
SUITE 1000
WASHINGTON, DC 20006

EXAMINER

HUG, ERIC J

ART UNIT	PAPER NUMBER
----------	--------------

1731

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/731,131	Applicant(s) KITAMURA ET AL.	
	Examiner Eric Hug	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-6, 8, and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitations "the first cover layer (12)" and "the second cover layer (13)". There is insufficient antecedent basis for these limitations in the claim.

Claim 3 recites the limitation "the third cover layer (15)". There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the material having high heat conductivity". There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitations "the cylindrical sleeve (1)", "the cylindrical main layer (11)", and "the composite material". There is insufficient antecedent basis for these limitations in the claim.

Claim 8 recites the limitation "the move". There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitations "the fluid" and "the auxiliary rolls (7)". There is insufficient antecedent basis for these limitations in the claim.

Art Unit: 1731

The term "high heat conductivity" in claims 4 and 5 is a relative term which renders the claim indefinite. The term "high" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6, 7, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Davenport (US 6,136,151).

Davenport discloses a roll cover for use on a press roll in the press section of a papermaking machine. The belt has a supporting base with a polymer coating. The base 24 may take a variety of forms, woven or non-woven, having a back side 26 and paper side 28. Top weft yarns 32 and bottom weft yarns 34 are shown along with warp yarns 36 and coating 38 on the paper side 28. Figure 3 shows the use of the roll cover on a press roll. See column 5, lines 36-47.

Claims 1, 6, 7, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Schiel (US 5,134,010).

Schiel discloses an endless flexible press jacket for a press roll which comprises a layer of elastomeric material which is provided with embedded layers of reinforcing yarns. The yarns include an inner longitudinal layer of yarns and a helical winding of peripheral yarns wrapped around the longitudinal yarns. The polymeric material is cast over the reinforcing yarns. See Figure 2a/b. The jacket may comprise one or more cast polymer layers. Figure 6 shows a two-layer structure.

Claims 1-7, 9, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Shieh (US 6,776,744).

Shieh discloses a covering for a roll core that can be metallic or non-metallic with a resin infused fiber reinforcement mat layer and a polymeric layer. The reinforcement fiber mats are made of glass fibers, carbon fibers, aramid fibers (e.g., Kevlar fibers), or other mineral/metallic high strength fibers. Carbon and aramid fibers are thermally conductive fibers. The covered rolls are used in applications such as calendering a web between rollers. The polymeric layer can serve as a transitional layer between the roll core and the fiber reinforced cover layer. A different additional layer of reinforcement fiber mat may be added being impregnated with an resin which is then cured to form a top layer. Figures 20 and 22 show a covering having four layers of resin impregnated fiber reinforcement mats (600, 605, 610, 615), with layers 600 and 605 having second plies, 602 and 608 respectively, made of a different constructions. These second plies are equivalently the claimed cushioning layers.

Claims 1, 4, 6, 7, 9, and 11 are rejected under 35 U.S.C. 102(a) as being anticipated by Viljanmaa (WO 02/075049) and under 35 U.S.C. 102(e) as being anticipated by Viljanmaa (US 6,880,456). The US reference qualifies as prior art under 102(e)(2) above with regards to the filing date of WO 02/075049.

Viljanmaa discloses a polymer covering for a press or calender roll used in a paper machine, the covering comprising an elastic resin and highly conductive carbon or aramid fibers therein. Figure 1 shows a calendering nip formed between a hard thermo roll and the polymer covered roll. See particularly column 2, lines 27-35.

Claims 1-3 and 6-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Vrotacoe et al (US 5,304,267).

Vrotacoe discloses a cylindrical sleeve for a roll of an offset printing press. The sleeve comprises a plurality of layers, including backing layer 60, compressible layers 62 and 64 which are reinforced with threads, an inextensible layer 66, and an outer printing layer 68. Layers 60, 66, and 68 are made of elastic/polymeric materials. Layers 62 and 64 comprise an elastomeric matrix with compressible threads and microspheres therein. See Figure 3 and column 4, line 10 to column 6, line 20. Alternatively, Figure 13 shows a tubular printing blanket comprising a rigid backing layer 252, a pair of rubber cement layers 254 and 256 including microspheres, and a pair of compressible fabric layers 258 and 260 including threads. See column 10, lines 36-50. The arrangements of Figs. 3 and 13 appear to read on at least one of the claimed arrangements of a main layer and a first cover layer both comprising a fiber reinforcing material and matrix resin,

Art Unit: 1731

a second cover layer as an inner layer, a third cover layer (as one of the outer layers), and a cushioning layer. The cylindrical sleeve/blanket is mounted such that a flow of pressurized gas can be directed along its inner surface. This allows the sleeve to be moved axially along the press roll. See column 4, line 64 to column 5, line 9.

NOTE: In each of the above rejections, the sleeve mounted press rolls of claims 7 and 11 have been rejected for the same reasons as for claim 6, because the claims recite only intended use of the press rolls without imparting any further limitations to the structure of the sleeve or the press roll. Apparatus claims must be structurally distinguishable from the prior art. The manner of operating the press roll does not distinguish it from the prior art. See MPEP 2114.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. All of the following references disclose a belt/cover for a press roll comprising a fabric base and a resin matrix.

Kayser (US 6,253,671).

Sakuma (6,214,752)

Vrotacoe et al (US 5,215,013).

Gaworowski et al (US 4,770,928)

Schaefer (DE 199 56 352)

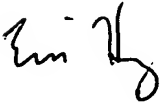
Steiner (DE 196 54 751)

Art Unit: 1731

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



jeh